



Problem Solving with FACET



Outline

Scenario 1: Examine Flights in Oakland Oceanic Sector 4

Scenario 2: Analyze United Airlines Flight 57

Scenario 3: Explore the HNL to SFO Traffic Stream

Scenario 4: Load Display GFS Data



Scenario 1: Examine Flights in Oakland Oceanic Sector 4

1. Use “Airspace Setup” to show only OC4HL and the North Pacific Coastal boundary
2. Show sector name labels
3. Start a FACET Playback using TRX_09122005
4. Use “Filters” to show only histories for flights passing through OC4HL
5. Use “Plot Data” to calculate the number of aircraft passing through OC4HL as a function of time
6. Use “Sector Count Analysis” to calculate the average, minimum, and maximum aircraft counts in OC4HL for 9/12/05
7. Use the 3D capabilities in FACET to visualize the flights in OC4HL (Hint: First pause FACET and hide all sector/center boundaries)
8. Stop the playback session



Scenario 2: Analyze United Airlines Flight 57

1. Restart a FACET Playback using TRX_09122005
2. Use “Filters” to show only histories for UAL57
(Flight appears at about 00:08 UTC)
3. Use “Plot Data” to display the altitude and ground speed as a function of time for UAL57
4. Use the Flight Plan Database to show all (1) flight plans, (2) tracks, and (3) sectors used by UAL57
5. Stop the run at the end of the analysis



Scenario 3: Explore the HNL to SFO Traffic Stream

1. Display and label HNL and SFO using “Display Wypt/Airway”
2. Zoom into the ZHN/OC3/OC4/OC7/ZOA area using “Select Zoom Area”
3. Display a direct route between HNL and SFO using “Show Flight Plan”
4. Start a FACET Playback using TRX_09122005
5. Use “Filters” to show only histories for the HNL to SFO stream
6. Use the Flight Plan Database to show all (1) flight plans, (2) tracks, and (3) sectors used by the HNL to SFO stream



Scenario 4: Load/Display GFS Data

1. Read the current GFS wind file (12/14/05, 0:00 UTC, 0hr forecast)
2. Display then clear the wind contours and arrows at 250 mb
3. Animate the wind magnitude contours display
4. Display then clear the wind threshold contours greater than 90 knots